Table 1: Examples of Control Probe Sequences

Name	Sequence	SEQ. ID NO.
Pro25G	atcatcgtagctggtcagtgtatcc	1
HCV48-24	acaggggagtgatctatggtggagt	2

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IN THE CLAIMS

Please replace Claims 1-84, as originally filed, with the following replacement Claims 30-49. Claims 30-34, 36 and 38 have been amended, and Claims 1-29 and 50-84 have been canceled, without prejudice, for being drawn to a non-elected invention. The amendments are reflected in the replacement claims herein below. The non-elected Claims 1-29 and 50-84 and are not included in the replacement claims herein. The attached Appendix, Part III, includes a marked-up copy of all of the claims, as filed, that illustrates the actual amendments to the claim language and shows the canceled claims for replaced Claims 1-84. The status of the claims is shown in parenthesis at the beginning of each claim.

30. (AMENDED) A method of making a microarray with enhanced feature detectability, the microarray having a microarray substrate, the method comprising the steps of:

providing a control probe in an array pattern of features on a surface of the microarray substrate, the control probe being attached to the surface in the array pattern, the control probe being directly or indirectly labeled with a control label that emits a control signal when excited by a light; and

providing an oligomer test probe to the features, the oligomer test probe being attached in the array pattern, such that the features comprise the control probe and the oligomer test probe, wherein the control probes enhance detection of the features without interfering with oligomer test probe hybridization.

31. (AMENDED) The method of making of Claim 30, wherein the step of providing the control probe comprises the steps of:

adding one end of the control probe to the surface of the substrate within the features; and

directly labeling the control probe with the control label.

32. (AMENDED) The method of making of Claim 30, wherein the step of providing the control probe comprises the steps of:

adding one end of the control probe to the surface of the substrate within the features; and

indirectly labeling the control probe with the control label by hybridization when exposed to a control-specific target material that comprises the control label.

33. (AMENDED) The method of making of Claim 30, wherein the step of providing the control probe comprises the steps of:

adding one end of the control probe to the surface of the substrate within the features, and

directly labeling the control probe with a control probe label of the control label, the control probe label emitting a control probe signal of the control signal; and

indirectly labeling the labeled control probe with a control target label of the control label by hybridization when exposed to a control-specific target material that comprises the control target label, the control target label emitting a control target signal of the control signal that is different from the control probe signal.

34. (AMENDED) The method of making of Claim 30, wherein the steps of providing the control probe and providing the oligomer test probe comprises the steps of:

adding one end of the control probe to the surface of the substrate at the features;

adding the oligomer test probe to the features; and

indirectly labeling the control probe with the control label and the oligomer test probe with a test label by hybridization when exposed to a hybridization mixture comprising a labeled test target sample complementary to the oligomer test probe and

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a labeled control-specific target material complementary to the control probe, wherein the labeled control-specific target material comprises the control label and the labeled test target sample comprises the test label.

35. The method of making of Claim 30, wherein the step of providing the oligomer test probe comprises the steps of:

adding the oligomer test probe to each feature of the substrate; and

directly labeling the oligomer test probe with a test label.

36. (AMENDED) The method of making of Claim 30, wherein the step of providing the oligomer test probe comprises the steps of:

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adding an oligomer test probe to the features of the substrate; and

indirectly labeling the oligomer test probe with a test label by hybridization when exposed to a test target material that comprises the test label.

37. The method of making of Claim 30, wherein the step of providing the control probe comprises the step of adding one end of the control probe to the surface of the microarray substrate; and the step of providing the oligomer test probes comprises the step of adding the oligomer test probe to an opposite end of the control probe, such that the control probe is a stilt that extends between the oligomer test probe and the surface, such that each feature comprises the control stilt and the oligomer test probe.

38. (AMENDED) The method of making of Claim 30, wherein the step of providing the control probe comprises the step of adding one end of the control probe to the surface of the microarray substrate; and the step of providing the oligomer test probe comprises the step of adding one end of the oligomer test probe to the surface of the substrate at the features, such that the features comprise the control probe and the oligomer test probe.

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39. The method of making of Claim 30, wherein the step of providing the control probe comprises the steps of:

presynthesizing the control probe; and

attaching one end of the presynthesized control probe to the surface of the substrate within each feature.

40. The method of making of Claim 39, wherein the step of providing the oligomer test probe comprises the step of:

presynthesizing the oligomer test probe; and

attaching the presynthesized oligomer test probe within each feature.

41. The method of making of Claim 40, wherein the step of attaching the presynthesized oligomer test probe comprises attaching the presynthesized oligomer test probe to an opposite end of the presynthesized control probe.

42. The method of making of Claim 39, wherein the step of providing the oligomer test probe comprises the step of:

synthesizing the oligomer test probe *in situ* within each feature.

43. The method of making of Claim 42, wherein the *in situ* synthesized oligomer test probe is synthesized on an opposite end of the presynthesized control probe.

44. The method of making of Claim 30, wherein the step of providing the control probe comprises the step of:

synthesizing the control probe *in situ* on the surface of the substrate within each feature.

45. The method of making of Claim 44, wherein the step of providing the oligomer test probe comprises the step of:

presynthesizing the oligomer test probe; and

attaching the presynthesized oligomer test probe within each feature.

46. The method of making of Claim 45, wherein the step of attaching the presynthesized oligomer test probe comprises attaching the presynthesized test probe to an unattached end of the *in situ* synthesized control probe.

47. The method of making of Claim 44, wherein the step of providing the oligomer test probe comprises the step of:

synthesizing the oligomer test probe *in situ* within each feature.

48. The method of making of Claim 47, wherein the *in situ* synthesized oligomer test probe is synthesized on an unattached end of the *in situ* synthesized control probe.

49. The method of making of Claim 30, wherein the steps of providing the control probe and providing the oligomer test probe comprises the steps of:

presynthesizing the control probe;

attaching one end of the presynthesized control probe to the surface of the substrate within each feature; and

synthesizing the oligomer test probe *in situ* on an opposite end of the presynthesized control probe.

REMARKS

The patent application was originally filed with Claims 1-84. Claims 1-84 were subject to a restriction requirement in a previous Office Action. Applicant elected without traverse the invention of Group III, Claims 30-49. In the pending Office Action, the Examiner withdrew Claims 1-29 and 50-84 from further consideration. Claims 30-49 were rejected in the pending Office Action. Further, the Abstract was objected to and the application was held noncompliant with 37 CFR 1.821 - 1.825 regarding sequence listings. Applicant has amended the Abstract, has amended Claims 30-34, 36 and 38, and has canceled non-elected Claims 1-29 and 50-84, without prejudice. The specification has been amended also to correct a minor typographical error and to comply with 37 CFR 1.821(d) with respect to the Notice to